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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sanjay Patel

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Ballard Spahr LLP

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ATLANTA, GA 30309-3915

EXAMINER

LEE, GENE W

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,833	Applicant(s) PATEL, SANJAY	
	Examiner Gene W. Lee	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 35-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/12/2007;4/23/2007;9/2/2008;6/15/2009;8/10/2009</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Claims 1-34 in the reply filed on February 22, 2011 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of Claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. **Claims 8 and 14 are objected to** because of the following informalities: the claim limitations "the SHIFT value" and "the SPACE key" should use an indefinite article rather than a definite article. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 7-14 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites the limitation "greater than the number of key presses required to display said data string on the data display means" in step (ii). The specification discloses features related to this limitation in paragraphs 18 and 152. However, the claim language is so unclear as to prevent one of ordinary skill in the art from clearly determining the metes and bounds of the claim scope. The number of key presses is a variable number that depends on the type of key press method used, which is unspecified, and therefore the number is also unclear, because the same word could be displayed with different numbers of key presses. Furthermore,

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it is unclear as to what is meant by 'required'. Does 'required' mean the minimum number out of all possible numbers? And if so, how is that determined?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-6, 15-20 and 22-29 are rejected** under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,818,437 (Grover).

8. Regarding claim 1, Grover teaches an interface system for a personal computer comprising an array of data input keys having multi- character indicia (Fig. 1 at 202), said interface system further comprising: data storage means; data processing means; and data display means (Abstract; Fig. 1), wherein the data processing means is adapted to facilitate a reduction in the number of key presses required to create a given data string to less than the number of characters within said data string (Abstract) by: (i) filtering data stored within the data storage means by initial character, as determined by the character or characters ascribed to a data input key initially pressed by a user (col. 7 lines 46-52); (ii) prioritizing said filtered data in real- time according to user-configurable prioritization parameters (col. 8 lines 37-40); and (iii) displaying one or more prioritized data strings on the data display means for subsequent selection by the user (col. 12, lines 6-9).

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9. Regarding claim 2, Grover teaches wherein successive key presses act to filter further the number of data strings displayed on the data display means for subsequent selection by the user (Abstract).

10. Regarding claim 3, Grover teaches wherein the data input keys within the array have multi-character indicia which are selected to accord with a statistical extrapolation of the most used alphanumerical character combinations in a given language, to thus facilitate a further reduction in the number of key presses required to create a given data string (Fig. 1 at 202).

11. Regarding claim 4, Grover teaches wherein the data input keys having multicharacter indicia are composite keys having at least primary and secondary indicia corresponding to primary and secondary key-values or key-functions (Fig. 1 at 202).

12. Regarding claim 5, Grover teaches wherein the data storage means is defined by one or more data dictionaries in which qualitative and/or quantitative information is stored in relation to each data string (col. 7 lines 46-50).

13. Regarding claim 6, Grover teaches wherein a configuration means is provided to allow a user to selectively enable or disable physical interactivity reduction characteristics of the interface system which facilitate a further reduction in the number of key presses required to create a given data string (col. 10 lines 29-36).

14. Regarding claim 15, Grover teaches wherein the configuration means also allows a user to selectively adjust the prioritization parameters according to the desired qualitative and/or quantitative characteristics of the data stored within the, or each, data dictionary (col. 8 lines 46-53).

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15. Regarding claim 16, Grover teaches wherein the qualitative and/or quantitative information comprises statistical and/or probability information relating to each data string stored within the data storage means (col. 8 lines 46-53)..

16. Regarding claim 17, Grover teaches wherein all qualitative and quantitative information is dynamically updated in real-time (col. 8 lines 46-53).

17. Regarding claim 18, Grover teaches wherein the data processing means maintains lookup chains between two or more data dictionaries such that a given data string in a first data dictionary is mapped to a data string or strings in one or more other data dictionaries for selection by the user (col. 7 lines 46-60).

18. Regarding claim 19, Grover teaches wherein where a given data string in a first data dictionary is mapped to a plurality of data strings in one or more other data dictionaries, said data strings are prioritized via the configuration means for ease of selection by the user (col. 7, lines 46-67).

19. Regarding claim 20, Grover teaches wherein the mapping is performed dynamically (col. 7 lines 46-60).

20. Regarding claim 22, Grover teaches wherein the data processing means maintains associative links between any given data string and up to n other data strings to thus display or project the most relevant longer data string comprised of n+1 data strings for selection by the user (col. 7 line 61-col. 8 line 30).

21. Regarding claim 23, Grover teaches wherein a plurality of the most relevant longer data strings are made available or displayed in a prioritized list for selection by the user (col. 8 lines 13-23).

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22. Regarding claim 24, Grover teaches wherein selection of a longer data string induces a repetition of associative linking such that a further one or more relevant longer data strings are displayed for selection by the user (col. 8 lines 13-23).

23. Regarding claim 25, Grover teaches wherein the relevance/prioritization of the, or each, longer data string is determined according to statistical and/or probability information stored within the, or each, data dictionary (col. 8 lines 36-43).

24. Regarding claim 26, Grover teaches wherein statistical information relates to the historical inputting and/or selection of data strings (col. 8 lines 36-43).

25. Regarding claim 27, Grover teaches wherein the historical inputting and/or selection information can be one or more of the following: (i) frequency of inputting; (ii) frequency of selection (iii) character length; (iv) lexical pattern density; and (v) chronological weighting (col. 8 lines 36-43).

26. Regarding claim 28, Grover teaches wherein probability information can be one or more of the following: (i) occurrence and/or association ratios of two or more data strings within a longer data string; (ii) context ratios determining the likelihood of a given data string being grouped with one or more other data strings to determine the context of a longer data string (col. 7 lines 46-60).

27. Regarding claim 29, Grover teaches wherein the one or more data strings displayed on the data display means for subsequent selection by the user are displayed in list format in descending order of priority (col. 8 lines 36-43).

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. **Claim 21 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Grover as applied to claim 20 above, and further in view of U.S. Patent No. 7,111,248 (Mulvey et al.)

Mulvey teaches resetting information (Fig. 7). The suggestion to apply the teaching of Mulvey to that of Grover is that both deal with stored information. The motivation to apply the reset teaching is that occasionally one wishes to reset stored information to a new or earlier state.

30. **Claims 30-31 and 33 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Grover as applied to claim 5 above, and further in view of U.S. Patent No. 2003/0195904 (Chestnut et al.)

31. Regarding claim 30, Chestnut teaches where synchronization of data dictionaries between two or more personal computers can be accomplished by wired connectivity ([66]). The suggestion to apply this teaching to Grover is that Grover is a computer with a data dictionary. The motivation to apply Chestnut to Grover is to supplement use of one personal computer device with a second, perhaps desktop device.

32. Regarding claim 31, Chestnut teaches wherein synchronization of data dictionaries between two or more personal computers can be accomplished by means

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of downloading from a common database ([66]). The suggestion to apply this teaching to Grover is that Grover is a computer with a data dictionary. The motivation to apply Chestnut to Grover is to supplement use of one personal computer device with a second, perhaps desktop device.

33. Regarding claim 33, Chestnut teaches wherein the population of the, or each, data dictionary with data and its corresponding qualitative and/or quantitative information may be accelerated by uploading onto the data storage means data strings resident on a personal computer or a remotely connected device ([66]). The suggestion to apply this teaching to Grover is that Grover is a computer with a data dictionary. The motivation to apply Chestnut to Grover is to supplement use of one personal computer device with a second, perhaps desktop device.

34. **Claim 32 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Grover as applied to claim 5 above, and further in view of U.S. Patent No. 3,648,245 (Dodds et al.).

35. Regarding claim 32, Dodds teaches manual entry of data (col. 13, lines 1-5). The suggestion to apply the teaching of Dodds to that of Grover is provided by the fact that Grover requires that data be entered somehow to populate the dictionary. The motivation to apply the teaching of Dodds to that of Grover is that a user may simply wish to enter data directly, perhaps a single word.

36. **Claim 34 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Grover as applied to claim 5 above, and further in view of U.S. Patent Publication No. 2002/0186883 (Roman).

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37. Regarding claim 34, Roman teaches an optical character recognition (OCR) scanning system utilizing a memory device, a registry, a scanning application, a processor, and a scanning device to scan the text of documents into memory (Abstract). The suggestion to apply the teaching of Roman to that of Grover is that the device of Grover requires entry of vocabulary data. The motivation to use the teaching of Roman is to avoid typing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene W. Lee whose telephone number is 571-270-7148. The examiner can normally be reached on Monday-Friday, 9:30am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LunYi Lao can be reached on 571-272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art
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